Reviewer’s report

Title: A Population-Based Study of Kurdish Breast Cancer in Northern Iraq: Hormone Receptor and HER2 Status and a Comparison with Arabic Women

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Reviewer: Shaheenah Dawood

Reviewer’s report:

Review of “A Population-Based Study of Kurdish Breast Cancer in Northern Iraq: Hormone Receptor and HER2 Status and a Comparison with Arabic Women”.

The aim of the paper by Raunak and colleagues was to investigate “the frequency of HR and HER2 expression among Kurdish and Arabic women with breast cancer”. It is an important paper describing characteristics of cohort within the middle east. My comments are as follows:

1. Although the author attempts to look at differences between Kurdish and arab women it appears that the real comparison was between women diagnosed in Iraq and those identified from the SEER database. The author thus needs to reflect this both in the title of the paper and the aim.

2. In the conclusion of the abstract the authors make a blanket statement that “frequency of non-testing is a deficiency in oncology practice that appears to be common in the Middle-East”. Although this may be true in Iraq it is certainly not true in other parts of the Middle East and it would be important that the authors revise this statement.

3. There should be a table 1 that summarizes the patient characteristics of both groups of patients including stage of disease and treatment if present. At present time there are too many smaller tables that can be summarized into one table of patient and tumor characteristics.

4. Why was the age incidence standardized ratio only calculated for the sulaimany patients. The authors have a cohort of over 800 patients. It would be important to look at the cohort as a whole and then subdivided into the pre identified subgroups.

5. As a whole the way the results are reported is a little confusing. It would be important to first look at the whole cohort. Report on their demographics and characteristics and then look at each subgroup separately before doing comparisons and within each subgroup and that with the SEER group.

6. The authors compare results to that of information derived from SEER. The authors do not comment what years of diagnosis of the information was extracted from within SEER.

7. The authors have a unique dataset of information on ER/PR and HER2. Taking that information it would be important to look at the proportions of triple negative, hormone receptor positive HER2 positive and hormone receptor...
negative HER2 positive subgroups of the whole cohort and compare that with what is reported in the literature.

8. It is important that the authors describe the drawbacks of this study highlighting the fact that the results are biased by which patients IHC was requested for.

**Level of interest:** An article of importance in its field

**Quality of written English:** Acceptable

**Statistical review:** Yes, but I do not feel adequately qualified to assess the statistics.

**Declaration of competing interests:**

I declare that I have no competing interests'